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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,520

09/24/2003

Masanobu Sato

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4349

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EXAMINER

TADESSE, YEWEBDAR T

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

02/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/669,520

Applicant(s)

SATO ET AL.

Examiner

YEWEBDAR T. TADESSE

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,9,47,48,50-55 and 59-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,9,47,48,50-55 and 59-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 4, 9, 47-48, 50-53, 55 and 59-61 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-116805 in view of JP 2003-60013.

As to claims 9, 47-48 and 55, 59, JP'805 discloses (see English translation detailed description; paragraph 6, Figs 1, 2a, 3b and 3d) a system wherein a processing liquid (drug solution with an etching) is supplied to one major surface of a substrate and one major surface is subjected to predetermined substrate processing, comprising: an atmosphere blocking member (base 1) which is faced with other major surface of the

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substrate and that is away from the substrate (W); and a gas supply unit (gas 11) which supplies an atmosphere gas to a space which is created between the atmosphere blocking member (base 1) and the substrate (W), a rotation means rotating the base with the substrate and wherein the atmosphere blocking member (base 1) which is faced with other major surface of the substrate and that is away from the substrate (W) becomes closer to the substrate with a distance toward a periphery edged of the atmosphere blocking member (see Figs 3b and 3d). JP'805 further teaches at least three or more support members (attachment components 3) which are disposed at the periphery edge of the atmosphere-blocking member (base 1) abutting on an edge surface of the substrate and supporting the substrate (see paragraph 26 and Figs 1, 2a, 3b and 3d). In the embodiment of Fig 2a of JP'805 the radius of the (bottom portion) atmosphere blocking member is smaller than that of the radius of the substrate and the peripheral edge area of the bottom portion of the atmosphere blocking member (base) is not exposed around the substrate. JP'805 lacks teaching a system including a substrate having a notch at the periphery edge of the substrate. JP'013 discloses a substrate (W) having a notch (N) indicating an orientation at the peripheral edge, supported by a system having wafer support members (pins 51), which are similar to JP'805's attachment components (3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a substrate having a notch at the edge in JP'805 to reliably treat the wafer without damage as taught by JP'013.

As to claim 4, JP'805 discloses a central area of the substrate -facing surface which is faced with an approximately central portion of the substrate is flat surface (see

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particularly Fig 3d) and a periphery edge area of the substrate-facing surface of the atmosphere blocking member (base 1) which is faced the periphery edge of the substrate is angles surface which becomes closer to the substrate with a distance toward a periphery edge of the substrate-facing surface.

With respect to claims 50-52, in JP'805 the support member (3) comprises a contact surface in line contact with the edge surface of the substrate, wherein a width of the contact is the same as the width of a portion of the line of contact and the line of contact becomes narrower with a distance away from the substrate (see Figs 2a-2d and 3a-3d).

As to claim 53, JP'805 lacks teaching a transportation unit transporting the substrate to the processing unit. Wen discloses (see fig 7) a transportation unit (transfer units 118,119), which transports substrates to the processing unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transportation unit in JP'805 to move the substrate in and out of the processing unit.

With respect to claims 60-61, JP'805's atmosphere blocking member is capable of preventing a mist from passing from one major surface of the substrate to the other major surface of the substrate.

4. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-116805 and JP 2003-60013 as applied to claim 9 and 10 and further in view of Matsukawa et al (US 5,518,542). JP'805 as modified lacks teaching a reversing unit,

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which reverses substrate. Matsukawa et al discloses (see Figs 6-7 and Abstract) double-sided substrate cleaning apparatus having a transportation unit (conveying mechanism 5) to transfer the substrate from processing unit and reversing unit (reversing mechanism 10) to reverse the substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a reversing unit in JP'805 in case one of the upper or the lower processing fluid supplying means is not working and reversing of the substrate is required.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. As explained above in Fig 2a of JP'805 the radius of the bottom portion of the atmosphere blocking member is smaller than the radius of substrate. As such the claimed invention is not clearly distinguished over JP'805, JP013 and Matsukawa et al.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEWEBDAR T. TADESSE whose telephone number is (571)272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


/Yewebdar T Tadesse/

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Primary Examiner, Art Unit 1792

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	10/669,520	SATO ET AL.	
	Examiner	Art Unit	
	YEWEBDAR T. TADESSE	1792	